



State of Utah

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

June 29, 2006

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

TO ALL BIDDERS CONCERNED:

SUBJECT: (Project No): STP-HPP-3184 (2) 0
(Description): SANTA CLARA DRIVE STREETSCAPE
Addendum No. 1

To Whom It May Concern:

We are submitting the following changes to the subject project.

1. The Bid Opening has been revised. The Bid Opening date has been changed from July 6, 2006 to July 11, 2006. The "Notice to Contractors has been revised to reflect Bid Opening date.

EBS requires you to change the "Bid Date" on your "Project Item Bid Detail" window. If you do not change the date, your bid will not be downloaded for "Bid Opening".

2. The "Measurement and Payment" has been revised.
3. Item 02831010* CMU Retaining Wall on page 10 of 18 has been revised to include waterproofing.
Item 02831020* Raised Planter on page 10 of 18 has been revised to include waterproofing.
4. Item 02511010* 8" PVC C-900 Waterline on page 16 of 18 has been revised to include temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.
5. Item 02511012* 10" Dip Waterline on page 16 of 18 has been revised to include temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.
6. Item 02511014* 12" Dip Waterline on page 16 of 18 has been revised to include temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.
7. Item 02511016* 24" Dip Waterline on page 16 of 18 has been revised to include temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.
8. A clarification concerning work to be completed by the Washington County Water Conservancy District at the Mandatory Pre-bid Meeting. Chuck Carney guaranteed a not-to-exceed price of \$3,500. This includes welding in a length of pipe on both lines involved, and sidewall fusion for airvac fittings. Savings below the not-to-exceed price shall be credited to Santa Clara City. Chuck plans on excavating enough length along the lines to be lowered to allow them to sag with the added length. All excavation and backfill is the responsibility of the contractor. Chuck will shut valves down for draining the pipe, but coordination will need to take place with the Santa Clara Canal Company (Lonne Gubler) and the St. George City Canal Company (Frank Kell). Jack Taylor at Santa Clara City will head this coordination effort.

9. Special Provision 00555M "Prosecution and Progress" has been revised.
10. Special Provision 02831S "Masonry" has been revised.
11. Special Provision 02912M "Contractor Furnished Topsoil" has been added.
12. Plan Sheet DT-01 has been revised.
13. Plan Sheet DT-19 has been revised.

Please consider these revisions before submitting your bid.

***DUE TO THE SIZE ONLY THE COVER LETTER WILL BE FAXED.

***ADDENDUM IS AVAILABLE AND MAY BE DOWNLOADED FROM THE UDOT WEBSITE AT
<http://www.udot.utah.gov/index.php?m=c&tid=317>

**RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED WHEN YOU SUBMIT YOUR BID. YOUR BID WILL
BE DECLARED NON-RESPONSE IF YOU DO NOT ACKNOWLEDGE THIS ADDENDUM.**

Sincerely,

Tamecha Maxwell

UDOT Project Manager

Sincerely,

[Signature]
for
Deputy Construction Engineer

Attach.

2005 - U.S. Standard Units (Inch-Pound Units) May 2, 2006

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Project # STP-HPP-3184(2)0

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 - 1. 00250S Prebid Conference
 - 2. 00555M Prosecution and Progress
 - 3. 00725M Scope of Work
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Federal Projects With Full Size Plan Sheets

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NOTICE TO CONTRACTORS

Sealed proposals will be received by the Utah Department of Transportation UDOT/DPS Building (4th Floor), 4501 South 2700 West, Salt Lake City, Utah. 84114-8220, until 2 o'clock p.m. Tuesday, July 11, 2006, and at that time the download process of bids from the USERTrust Vault to UDOT will begin, with the public opening of bids scheduled at 2:30 for BITUMINOUS PAVEMENT, RECONSTRUCTION of Santa Clara Drive; Streetscape improvements in WASHINGTON County, the same being identified as Federal Aid Project No: STP-HPP-3184(2)0.

Federal Regulations:

In conformity with the Federal-Aid Highway Act of 1968, the U.S. Department of Labor has certified the minimum wage rates to be paid on this contract. These rates are made a part of the contract documents. This Department has been advised by the Wage and Hour Division, U.S. Department of Labor, that contractors engaged in highway construction work are required to meet the provisions of the Fair Labor Standards Act of 1938, (52 Stat. 1060). This contract is subject to all appropriate Federal Laws, including Title VI of the Civil Rights Act of 1964.

Project Location: 1.43 Miles of Route: NA from R.P. 5+80.00 to R.P. 81+08.45

The principal items of work are as follows (for all items of work see attachment):

HMA - 3/4 inch
Traffic Control
24" DIP Waterline

The project is to be completed: in 350 Calendar Days.

Mandatory Pre-bid Conference: June 28, 2006, 01:30 pm, Santa Clara City Council Chambers
2721 Santa Clara Drive
Santa Clara, Utah 84765

Conference attendance is a requirement for bid submission.

Other Requirements:

All project bidding information, including Specifications and Plans, can be viewed, downloaded, and printed from UDOT's Project Development Construction Bid Opening Information website, <http://www.udot.utah.gov/index.php/m=c/tid=319>. To bid on UDOT projects, bidders must use UDOT's Electronic Bid System (EBS). The EBS software and EBS training schedules are also available on this website.

Project information can also be reviewed at the main office in Salt Lake City, its Region offices, and its District offices in Price, Richfield, and Cedar City.

Project Plans cannot be downloaded or printed from the website unless your company is registered with UDOT. Go to UDOT's website to register. Unregistered companies may obtain a **CD**, that contains the Specifications and Plans, from the main office, 4501 South 2700 West, Salt Lake City, (801) 965-4346, for a fee of \$20.00, plus tax and mail charge, if applicable, none of which will be refunded.

Prequalification of bidders is required. Prior to submitting a bid, the bidder must have on file with the Utah Department of Transportation a completed and approved contractor's application for prequalification. Department processing time is 10 working days from receipt of properly executed documentation.

As required, a contractor's license must be obtained from the Utah Department of Commerce.

Each bidder must submit an electronic bid bond from an approved surety company using UDOT's Electronic Bid System (EBS); or in lieu thereof, cash, certified check, or cashier's check for not less than 5% of the total amount of the bid, made payable to the Utah Department of Transportation, showing evidence of good faith and a guarantee that if awarded the contract, the bidder will execute the contract and furnish the contract bonds as required.

The right to reject any or all bids is reserved.

If you need an accommodation under the Americans with Disabilities Act, contact the Construction Division at (801) 965-4346. Please allow three working days.

Additional information may be secured at the office of the Utah Department of Transportation, (801) 965-4346.

Dated this 10th day of June, 2006.

UTAH DEPARTMENT OF TRANSPORTATION

Revised Date: 06/29/2006

Measurement and Payment

10- ROADWAY

1	00830001U	Equal Opportunity Training	Hour
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2	012850010	Mobilization	Lump sum
	Payment	Amount Paid	When Paid
	First	The lesser of 25% of Mobilization or 2.5% of contract	With first estimate
	Second	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 5% of contract
	Third	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 10% of contract
	Fourth	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 20% of contract
	Final	Amount bid in excess of 10% of contract price.	Project Acceptance-Final

3	013150010	Public Information Services	Lump Sum
	Payment	Amount Paid	When Paid
	First	25% of bid item amount	With first estimate
	Second	Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

4	015540005	Traffic Control	Lump Sum
	Payment	Amount Paid	When Paid
	First	25% of the bid item amount	With first estimate
	Second	Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

5	015720020	Dust Control and Watering	1000 Gallon
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6	01891002*	Move Mailbox	Each
In place			

7	018920040	Reconstruct Valve Box	Each
In place			
8	018920050	Reconstruct Manhole	Each
In place			
9	01893010*	Reconstruct Irrigation Valve Box	Each
In place			
10	02056001*	Granular Borrow (Pulverized Asphalt)	Cubic Yard
In place. Includes labor and equipment to haul pulverized asphalt from stockpiling areas and grade and compact the material in place as shown on the plans.			
11	02083010*	Fire Hydrant Assembly	Each
Includes the hydrant and all fittings, valves, gaskets, concrete, gravel materials, etc. from the main to the fire hydrant.			
12	02216001*	Potholing for Utilities	Each
13	02221002*	Remove Box Culvert	Feet
Removed, along the centerline of the culvert			
14	022210030	Remove Catch Basin	Each
Removed			
15	022210035	Remove Diversion Box	Each
Removed			
16	02221004*	Relocate Cattle Guard	Each
Includes labor, restoration of landscaping and surfacing, and any other items incidental to relocating the cattle guard.			
17	022210050	Remove Tree	Each
Removed			

18	022210080	Remove Fence	Feet
Removed			
19	022210095	Remove Pipe Culvert	Feet
20	022210110	Remove Concrete Sidewalk	Square yard
Use the area of horizontal projection to compute the area of steps.			
21	022210115	Remove Concrete Driveway	Square yard
22	022210120	Remove Concrete Curb	Feet
23	022210125	Remove Concrete Curb and Gutter	Feet
24	022210130	Remove Gutter	Feet
25	02221016*	Pulverize and Stockpile Asphalt	Square yard
<p>Regardless of the depth encountered.</p> <p>A. Do not measure discontinued roads within the limits of the new roadbed or roads that are disturbed in performing other items of work.</p> <p>B. Quantity measured and paid is excluded from measurement and payment under "Roadway Excavation".</p>			
26	02221018*	Remove Asphalt Driveway	Square yard
<p>Regardless of the depth encountered.</p> <p>A. Do not measure discontinued roads within the limits of the new roadbed or roads that are disturbed in performing other items of work.</p> <p>B. Quantity measured and paid is excluded from measurement and payment under "Roadway Excavation".</p>			
27	02221020*	Remove Fire Hydrant Assembly	Each
Removed			
28	02221024*	Remove Concrete Lined Ditch	Feet
Removed			
29	02221026*	Remove Boulder	Each
Removed			

30	022310010	Clearing and Grubbing	Lump sum
Removed			
31	023160020	Roadway Excavation (Plan Quantity)	Cubic yard
32	023730010	Loose Riprap	Cubic Yard
In place, computed using the in-place surface area and specified thickness.			
33	02374001*	Catch Basin Filter Insert	Each
In Place			
34	02511070*	Connect To Existing Waterline	Each
Includes a solid sleeve coupling at the connection.			
35	02511072*	3/4" Water Service	Each
Includes corporation stop, service line and reconnection to the customer.			
36	02511073*	1" Water Service	Each
Includes corporation stop, service line and reconnection to the customer.			
37	02511074*	Reconstruct 3/4" Water Service	Each
Includes corporation stop, service line, meter setter, backflow preventer and valves, meter box, and reconnection to the customer.			
38	02511076*	Reconstruct Irrigation Service	Each
Includes reconnection to the existing irrigation line, service line and reconnection to the customer.			
39	02511078*	Meter to Building Water Connection	Each
Includes labor, pipe, fittings, trenching, backfilling, restoration of landscaping and surfacing, and any other items incidental to replacing the water connection between the water meter and the customer's building.			
40	02511300*	Waterline Looping	Each
Includes fittings, gaskets, pipe and joint restraints.			

41	02522015*	3" WCWCD Airvac	Each
Includes providing and installing 3" Airvac on 28" HDPE irrigation pipe, and providing manhole and cover as shown on the plans. Also includes charges from the Washington County Water Conservancy District for providing and installing fittings in preparation for the airvac connection.			
42	02522018*	8" Irrigation Drain Line	Lump
In place. Includes purchasing of 8" HDPE pipe and fittings from the Washington County Water Conservancy District, 8" gate valve and installation thereof, excavation, laying, backfilling, and forming to outlet irrigation drain line at concrete headwall.			
43	02522019*	Adjust Irrigation Line	Lump
Includes coordinating with the Washington County Water Conservancy District to shut down and drain 28" irrigation line, excavation, assisting with pipe welding, testing, pipe bedding, backfilling, and any incidentals associated with restoring farm facilities disturbed in the process of adjusting the irrigation line. Also included are charges from the Washington County Water Conservancy District for 28" HDPE DR 17 (purple stripe) and 8" HDPE DR 17 (purple stripe) pipe, fittings, and welding of HDPE pipes.			
44	026100194	12 inch Smooth Lined Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
45	026100196	18 inch Smooth Lined Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
46	026100198	24 inch Smooth Lined Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
47	026100200	30 inch Smooth Lined Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
48	026100202	36 inch Smooth Lined Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
49	026100206	48 inch Smooth Lined Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
50	026100252	18 inch Smooth Lined Polyethylene Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			

51	026100476	36 inch Elliptical Reinforced Concrete Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
52	026100478	42 inch Elliptical Reinforced Concrete Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
53	026100480	48 inch Elliptical Reinforced Concrete Pipe Culvert, Class C	Feet
Measured along the centerline of barrel in place.			
54	02612010*	8 inch PVC Schedule SDR 35	Feet
Measured along the centerline of barrel in place.			
55	02612012*	Reconstruct Sewer Lateral	Each
In place including cleanouts.			
56	02612014*	6 inch PVC Sewer Service	Each
In place including cleanouts.			
57	026130020	Culvert End Section 12 inch	Each
In place			
58	02631008*	Junction Structure	Each
In place			
59	02631009*	Sanitary Sewer Manhole	Each
In place.			
60	02631010*	Standard Manhole, 4' Dia	Feet
In place			
61	02631020*	Standard Manhole, 5' Dia	Feet
In place			

62	02632010*	Sidewalk Drain Type B	Each
In place, including all steel tubing and anchors as shown in the plans. Provide connection to existing drain pipes as necessary.			
63	02632012*	Yard Drain	Each
In place, Including all concrete, steel, frame, lid and cleanout box (where required) to make a complete and functional yard drain as detailed in the plans.			
64	026350025	Manhole Frame and Grated Cover, Std Dwg GF 1	Each
In place			
65	026350030	Manhole Frame and Solid Cover, Std Dwg GF 2	Each
In place			
66	02635004*	Open Curb Inlet Grate and Frame, Std Dwg GF 13	Each
In place			
67	026350040	Rectangular Grate and Frame (Bicycle Safe Grating) Std Dwg GF 3	Each
In place			
68	026350045	Solid Cover & Frame, Std Dwg GF 5	Each
In place			
69	02635005*	Trash Rack, Std Dwg GF 10	Each
In place			
70	026350050	Manhole Steps, Std Dwg GF 6	Each
In place			
71	02721007*	Untreated Base Course 3/4 inch or 1 inch Max	Ton
In place			
72	02741006*	HMA - 3/4 inch	Ton
Includes aggregates, asphalt binder, hydrated lime, other additives, etc. The Department will not pay separately for asphalt binder, hydrated lime, additives, etc.			

73	02741007P	Asphalt Pavement Transition	Ton
Includes pavement cutting, removal of pavement, roadway excavation, untreated base course, HMA, and all incidental labor, equipment, and materials necessary to complete the item.			
74	02748004*	Emulsified Asphalt CSS-1	Ton
Includes water required for 2:1 dilution (two parts concentrate to one part water) by the manufacturer.			
75	027680030	4 inch Pavement Marking Epoxy - White, Type I	Feet
Measurement - Painted Pavement Messages: A. Do not measure the gap in the broken line. B. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			
76	027680035	8 inch Pavement Marking Epoxy - White, Type I	Feet
Measurement - Painted Pavement Messages: A. Do not measure the gap in the broken line. B. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			
77	027680040	4 inch Pavement Marking Epoxy - Yellow, Type I	Feet
Measurement - Painted Pavement Messages: A. Do not measure the gap in the broken line. B. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			
78	027680070	Pavement Message (Epoxy), Type I	Each
Measurement - Painted Pavement Messages: A. Letter = one message. B. Arrow = one message. C. Multi-headed arrow = one message per arrow. D. School crossbars = one message per 24 inch x 10 ft bar. E. Crosswalk = two message per lane and two messages per shoulder. F. Stop Bar = one message per lane and one message per shoulder. G. Railroad crossing markings = seven messages per lane. 1. 'R' = one message each (two required). 2. 'X' = two messages. 3. Transverse Bar = one message each (two required). 4. Stop Bar = one message. H. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			
79	02771000*	Concrete Gutter	Square Feet
In place. Includes excavation and untreated base course.			

80	027710020	Concrete Curb Type M2	Feet
Measured along the roadway face. Includes excavation and untreated base course.			
81	027710025	Concrete Curb and Gutter Type B1	Feet
Measured along the roadway face. Includes excavation and untreated base course.			
82	02771003*	Concrete Driveway Flared, 6 inch Thick (Pocked)	Square Feet
In place, include Radius and Flares. Includes excavation and untreated base course.			
83	02771004*	Concrete Driveway Flared, 7 inch Thick (Pocked)	Square Feet
In place, include Radius and Flares. Includes excavation and untreated base course.			
84	02771005*	Pedestrian Access Ramp (Colored and Pocked)	Each
In place. Includes all materials, coloring agent and work necessary for a complete pedestrian access ramp. The curb cut will remain part of the curb and gutter installation			
85	027710100	Plowable End Section	Each
In place. Includes excavation and untreated base course.			
86	02771017*	Concrete Curb Type B5 Modified	Feet
Measured along the roadway face.			
87	02776001*	Concrete Sidewalk (pocked)	Square yard
In place. Includes material to pock the sidewalk surface, excavation and untreated base course.			
88	02776003*	Concrete Flatwork 4 inch thick (Pocked)	Square feet
In place. Includes material to pock the concrete surface excavation and untreated base course.			
89	027760040	Concrete Flatwork 6 inch thick	Square feet
In place. Includes excavation and untreated base course.			
90	02776006*	Concrete Flatwork 8 inch thick (Stamped and Colored)	Square feet
In place. Includes all material to stamp and color the concrete surface, excavation and untreated base course.			

91	02831010*	CMU Retaining Wall	Square Feet
Includes excavation and backfill, waterproofing and all materials and workmanship to provide reinforced concrete footings and concrete masonry unit retaining walls with stucco, stone masonry facing as shown on the plans.			
92	02831020*	Raised Planter	Feet
Includes excavation and backfill, waterproofing and all materials and workmanship to provide reinforced concrete footings and reinforced retaining walls with stone masonry facing, as shown on the plans.			
93	02896002*	Ring and Lid Monument	Each
In place. Includes all materials and work necessary to complete ring and lid Monument.			
94	032110010	Reinforcing Steel, Coated	Pound
Measurement: Per plan quantity. A. Do not include the mass of the coating or the specified test bars as computed weight. B. Department will not make allowances for extra reinforcing steel required to provide lap splices that are requested by the Contractor. C. Department will not make allowances for clips, chairs, wire, or other materials used for fastening reinforcement in place.			
95	033100020	Concrete – Small Structure	Cubic Yard
Measurement: A. When the contract provides measurement per cubic yard, measure quantities by the dimensions shown. B. Use the prismoidal formula when the method of average end areas is not sufficiently accurate. C. Do not measure concrete required to fill over breakage of excavation for footings, walls, or slabs. D. Department will not deduct for volume occupied by pipes (other than culverts), reinforcing steel, piles, metal grillage, anchors, conduits, or weep holes. Payment: A. Department will pay for reinforcing steel for structures separately, unless otherwise noted. B. Department will pay separately for concrete placed in individual structures containing less than 8 yd ³ at the bid price per cubic yard for Concrete, Small Structure. C. Department will make no separate payment for excavation for structures.			
96	13554001*	Polymer Concrete Junction Box Type II	Each
In place			
97	13554002*	Polymer Concrete Junction Box Type III	Each
In place			
98	16525001D	Highway Lighting System	Lump Sum
Includes installation of city furnished items and all materials and workmanship to provide a complete and fully operational highway lighting system.			

99	16561002*	Future Use Signal Conduit Trench	Feet
Includes trenching, installation of city furnished items, backfill and all materials, equipment and workmanship to provide future use conduit trenches as shown on the plans.			

30- LANDSCAPING

100	028120010	Pressurized Irrigation System	Lump Sum
Include all materials and workmanship to provide a complete and fully operational pressurized irrigation system.			

101	02816001*	Water Feature	Lump Sum
Include all materials and workmanship to provide a complete and fully operational water feature.			

102	02912001P	Contractor Furnished Topsoil	Cubic Yard
In place			

103	02913040*	Shredded Bark Mulch, (3" Deep)	Square Yard
In place			

104	029220060	Turf Sod	Square Feet
In place			

105	2932007P	Achillea Millefolium – Common Yarrow	Each
In place			

106	2932008P	Achillea Millefolium 'Paprika' – Paprika Yarrow	Each
In place			

107	02932009P	Convolvulus Cneorum - Bush Morning Glory	Each
In place			

108	02932010P	Dietes Vegeta – Fortnight Lily	Each
In place			

109	02932011P	Gaura Lindheimeri 'Siskiyou Pink' - Siskiyou Pink Gaura	Each
In place			

110	02932012P	Iberis Sempervirens – Evergreen Candytuft	Each
In place			
111	02932013P	Iris SPP. – Iris – Purple Color	Each
In place			
112	02932014P	Lavendula X Heterophylla – Sweet Lavender	Each
In place			
113	02932015P	Liriope Muscari – Giant Lily Turf	Each
In place			
114	02932016P	Narcissus SSP. – Daffodils – Yellow Color	Each
In place			
115	02932017P	Pennisitum Setaceum ‘Rubrum’ – Red Fountain Grass	Each
In place			
116	02932018P	Tulipa SSP. – Tulips – Peach Or Coral Color	Each
In place			
117	02932019P	Euonymous Fortunei ‘Moonshadow’ – Moonshadow Euonymous	Each
In place			
118	02932020P	Hesperaloe Parviflora – Red Yucca	Each
In place			
119	02932021P	Mahonia Aquifolium ‘Orange Flame’ – Orange Flame Oregon Grape	Each
In place			

120	02932022P	Nandina Domestica 'Moon Bay' – Moon Bay Heavenly Bamboo	Each
In place			
121	02932023P	Pittosporum Tobira 'Wheeleri' – Wheeler's Tobira	Each
In place			
122	02932025P	Cotinus Coggygria 'Royal Purple' – Smoke Tree	Each
In place			
123	02932026P	Pittosporum Tobira 'Variegata' – Variegated Tobira (Specimen)	Each
In place			
124	02932027P	Lagerstroemia Indica 'Lavender' – Lavender Grape Myrtle	Each
In place			
125	02932028P	Ligustrum Lucidum – Glossy Privet	Each
In place			
126	02932029P	Delosperma Cooperi – Purple Passion Ice Plant	Each
In place			
127	02932030P	Delosperma 'Gold' – Gold Ice Plant	Each
In place			
128	02932031P	Euonymous 'Colorata' – Purple-Leaf Wintercreeper	Each
In place			
129	02932032P	Gazania 'Copper King' – Copper King Gazania	Each
In place			
130	02932033P	Rosmarinus Officinalis 'Tuscan Blue' – Tuscan Blue Rosemary	Each
In place			

131	02932034P	Sedum Spurium – Green Stonecrop	Each
In place			
132	02932035P	Sedum Spurium – ‘Bronze Carpet’ – Bronze Carpet Stonecrop	Each
In place			
133	02932036P	Trachelospermum Jasminoides – Star Jasmine	Each
In place			
134	02932037P	Platanus X Acerifolia ‘Bloodgood’ – London Plane Tree	Each
In place			
135	02932038P	Baccharis ‘Centennial’ – Centennial Coyote Brush	Each
In place			
136	02932039P	Berberis Thunbergii ‘Atropurpurea’ – Red-Leaf Japanese Barberry	Each
In place			
137	02932040P	Rosmarinus officinalis ‘Huntington Carpet’ – Rosemary Groundcover	Each
In place			
138	02933010*	Impermeable Membrane (Plant Quantity)	Square Yard
Includes all excavation, backfill, and other materials necessary to hold the membrane in place as shown in the plans.			
139	029360010	Establishment Period	Lump Sum
140	16581000*	Landscape Electrical System	Lump Sum
Includes all conduit, wire, junction boxes, trenching, backfill, installation of city furnished items, and all labor, equipment, and incidental materials necessary to complete the items of work as shown in the plans.			

80- NON-PARTICIPATING (Future Use Conduit)

141	16561001*	Future Use Conduit Trench	Feet
Includes trenching, installation of city furnished items, backfill and all materials, equipment and workmanship to provide future use conduit trenches as shown on the plans.			

80- NON-PARTICIPATING (Joint Utility Trench)

142	16132000*	Primary Enclosure Sweep	Each
In place. Includes all materials, equipment and workmanship to provide trenching, backfill, concrete and installation of conduit and primary enclosures (provided by Santa Clara City and the City of St. George Power Department) as shown on the plans. Includes installation of all conduit, and fabrication and installation of conduit sweeps from the Joint Utility Trench to the Primary Enclosure			

143	16132001*	Existing Primary Enclosure Sweep	Each
In place. Includes all materials, equipment and workmanship to provide trenching, backfill, concrete, and installation of conduit (provided by Santa Clara City and the City of St. George Power Department) as shown on the plans. Includes installation of all conduit, and fabrication and installation of conduit sweeps from the Joint Utility Trench to the Existing Primary Enclosure			

144	16132002*	Manhole Sweep	Each
In place. Includes all materials, equipment and workmanship to provide trenching, backfill, concrete, core drilling and installation of conduit and manholes (provided by Santa Clara City and the City of St. George Power Department) as shown on the plans. Includes installation of all conduit, and fabrication and installation of conduit sweeps from the Joint Utility Trench to the Manhole.			

145	16132002*	Existing Manhole Sweep	Each
In place. Includes all materials, equipment and workmanship to provide trenching, backfill, concrete, core drilling and installation of conduit (provided by Santa Clara City and the City of St. George Power Department) as shown on the plans. Includes installation of all conduit, and fabrication and installation of conduit sweeps from the Joint Utility Trench to the Manhole.			

146	16711010*	Joint Utility Trench	Feet
Includes coordination with all utilities in proposed trench, trenching, installation of conduit furnished by Santa Clara City, City of St. George Power Department, and Qwest, backfill, and all materials, equipment and workmanship to provide the joint utility trench as shown on the plans.			

80- NON-PARTICIPATING (Santa Clara City Culinary Waterline)

147	02511010*	8" PVC C-900 Waterline	Feet
In place including testing. Tracer wire is incidental to the pipeline. Temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.			
148	02511012*	10" Dip Waterline	Feet
In place including testing. Tracer wire is incidental to the pipeline. Temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.			
149	02511014*	12" Dip Waterline	Feet
In place including testing. Tracer wire is incidental to the pipeline. Temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.			
150	02511018*	8" Gate Valve	Each
In place. Mechanical Joint thrust restraints are incidental to the valve.			
151	02511022*	12" Gate Valve	Each
In place. Mechanical Joint thrust restraints are incidental to the valve.			
152	02511024*	12" Push-On Plug	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
153	02511026*	10" Gate Valve	Each
In place. Mechanical Joint thrust restraints are incidental to the valve.			
154	02511028*	8" x 8" Tee	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
155	02511030*	10" x 8" Tee	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
156	02511034*	12" x 8" Tee	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

157	02511036*	12" x 8" Cross	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
158	02511038*	6" 45° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
159	02511040*	8" 45° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
160	02511042*	8" 90° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
161	02511048*	12" 11.25° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
162	02511050*	12" 22.5° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
163	02511052*	12" 45° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
164	02511058*	12" x 10" Reducer	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
165	02511060*	10" x 8" Reducer	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
166	02511062*	8" x 6" Reducer	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			
167	02511064*	8" Push-On Plug	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

168	02511066*	8" x 4" Reducer	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

80- NON-PARTICIPATING (St George Culinary Waterline)

169	02511016*	24" Dip Waterline	Feet
In place including testing. Tracer wire is incidental to the pipeline. Temporary and permanent asphalt trench patching to be incidental to the pipeline. Permanent asphalt patching on side streets shall be hot mix asphalt, locally approved mix.			

170	02511020*	24" Butterfly Valve	Each
In place. Mechanical Joint thrust restraints are incidental to the valve.			

171	02511032*	24" x 12" Tee	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

172	02511044*	24" 11.25° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

173	02511046*	24" 22.5° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

174	02511054*	24" 45° Bend	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

175	02511056*	24" x 20" Reducer	Each
In place. Mechanical Joint thrust restraints are incidental to the fitting.			

176	02511068*	3" Air Vac	Each
In place. Includes labor, equipment, air vac, pipe, fittings, vault, manhole cover, vent, and any other accessories required for a full and complete air vac.			

XIII. Special Provisions and Supplemental Specifications

SPECIAL PROVISION

STP-HPP-3184(2)0

SECTION 00555M

PROSECUTION AND PROGRESS

Delete Article 1.6, paragraph A and replace with the following:

- A. Develop a baseline construction schedule using Primavera 5.0 (or the current version) or Primavera Contractor. Accurately reflect in the schedule the proposed approach to accomplish the work outlined in the Contract documents conforming to all requirements of this article.

Replace PART I, Section 1.9 “Limitation of Operations”, with the following:

- A. Conduct the work to minimize interference with traffic.
- B. Work Hours: All work is to be done between the hours of 6:00 a.m. to 10:00 p.m. Monday through Saturday, except as otherwise noted.
- C. Phasing - A complete, detailed construction phasing plan has not been included. Submit a traffic control plan per Section 01554. Prior to construction submit a construction phasing and sequencing plan. Address the following elements in the construction phasing and sequencing plan:
 - 1. Maintenance of one lane of traffic in each direction from 6:00 a.m. to 10:00 p.m. through the limits of the project is encouraged. However, one-way traffic with flagging or temporary detours, as appropriate, is allowable. All plans for one-way traffic control shall be reviewed and approved by Santa Clara City and the Engineer before implementation. Temporary traffic lanes shall be composed of 3” thick asphalt pavement (local approved mix). Temporary paving is incidental to Traffic Control.
 - 2. Night-time work shall be approved by the Engineer for utility construction work.

3. From 10:00 p.m. to 6:00 a.m. the Contractor is not required to maintain traffic lanes on Santa Clara Drive except for local traffic.
4. Intersecting streets traffic along Santa Clara Drive may be closed between the hours of 10:00 p.m. – 6:00 a.m. and 9:00 a.m. – 4:30 p.m.
5. Construct the Chapel Street intersection during the school's summer break (May 26- Aug 14, 2006 and May 25- Aug 20, 2007). Should utility construction interfere with pedestrian traffic in this area, provide appropriate signing and facilities to accommodate pedestrians.

E. Traffic Control

1. Maintain minimum 11-foot traffic lanes. Provide a minimum of two feet of separation to any rigid barrier or hazard.
2. During closures between 10:00 p.m. and 6:00a.m., detour traffic to nearest possible route.
3. Throughout the project, maintain traffic on a hard riding surface. For temporary pavement, use 3-inches of untreated base course and 3-inches of hot mix asphalt (locally approved mix). A temporary riding surface of untreated base course can be used in traffic areas for a period not to exceed 48 hours. Trenches may be temporarily patched with cold mix asphalt (locally approved mix). Waterline trenches on side streets shall be patched with hot mix asphalt.
4. Maintain an acceptable riding surface within the construction zone. As a minimum, provide a surface of untreated base course that is graded, compacted and maintained for both dust control and to provide a smooth and safe riding surface for the public.

F. Project Time Limits

1. Reach substantial completion for the entire project within 350 calendar days from the start of construction.
2. Do not perform any work on construction activities during the following:
 - A. Friday and Saturday prior to Easter Sunday.
 - B. Swiss Days (September 22-23, 2006; TBA 2007)

G. Driveways and Property Access

1. Maintain vehicular and pedestrian access when possible during construction to all businesses and residences located within the project limits.
2. Coordinate construction of driveways and accesses through the third-party Public Information Manager and individual business owners.
3. Keep driveways open as much as possible during construction. Closure of an access should only be considered outside of normal business hours, except during mainline pavement construction adjacent to the affected access. Notify affected residents and business owners seven days in advance of driveway closures.
4. Adequately sign all business accesses located within the construction zone.
5. Finish construction of curb & gutter, sidewalk, and driveways within 60 calendar days of commencing surfacing removal in the half-width along any particular property frontage. Pay estimates will be processed only with strict compliance to this standard.

H. Permits

1. This project is covered by a Storm Water General Permit for Construction Activities issued by the State of Utah, Department of Environmental Quality, Division of Water Quality (DWQ). Abide by the conditions of the Storm Water Pollution Prevention Plan for this project as specified by the DWQ and UDOT (see sheet 1D). Submit the Notice of Intent (NOI) prior to construction under the review and approval of the Engineer. Submit a Notice of Termination (NOT) at the end of construction under the review and approval of the Engineer. The NOI and NOT forms are only available from the State DWQ and can be submitted online or downloaded through the DWQ website at:
http://www.eq.state.ut.us/eqwq/dwq_home.ssi.

I. Utilities

1. Utility relocation work required by the Contractor is contained within the project. All work done by the Contractor on utilities is subject to inspection by an authorized agent of the utility owner.
2. Maintain 12 inches of cover over all utilities during construction.
3. Relocation of a Questar Gas facility will be taking place during the project. Coordination and cooperation with the Questar Gas contractor (Niels Fugal & Sons) will be required, and is incidental to the project.
4. Maintain flows through the secondary water systems during the regular irrigation season (March 1 through October 31). During construction activities associated with 'Adjust Irrigation Line', these systems may be shut down for a period not to exceed 48 hours. Coordinate this shut-down with Chuck Carney from the Washington County Water Conservancy District at 435-673-3617.

J. Construction Staging and Material Disposal Areas

1. Santa Clara City has identified environmentally cleared areas for construction staging, stockpiling of pulverized asphalt, and disposal of clean waste material. These areas are shown on Sheet DT 15 in the plans. Coordinate the use of these areas with Jack Taylor (435-656-4690).
2. The Contractor shall stockpile remaining pulverized asphalt after Granular Borrow (Pulverized Asphalt) has been placed (see supplemental specification 02221M), for use by Santa Clara City, in the city shop staging area identified on Sheet DT 15.
3. Clean waste material shall be disposed of in the environmentally cleared areas identified on Sheet DT 15.
4. Clean waste material shall consist of the following:
 - A. Non-reinforced concrete broken into 1' minus pieces.
 - B. Soil and rock material (1' minus)
5. Mix waste concrete pieces and soil evenly. Compact and level waste material mixture as directed by the Engineer.

6. Reinforced concrete, contaminated soils, organic materials and other non-soil waste shall be disposed of by the Contractor off-site at no additional cost to the City.

END OF SECTION

April 12, 2006

SPECIAL PROVISION

STP –HPP-3184(2)0

SECTION 02831S

MASONRY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Materials and procedures for constructing CMU (concrete masonry unit) retaining walls and raised planters, and stonework for raised planters and water features.

1.2 RELATED SECTIONS

- A. Section 02056: Common Fill
- B. Section 02317: Structural Excavation
- C. Section 02324: Compaction
- D. Section 03055: Portland Cement Concrete
- E. Section 03211: Reinforcing Steel and Welded Wire
- F. Section 03310: Structural Concrete
- F. Section 03390: Concrete Curing

1.3 SUBMITTALS

- A. CMU Walls
 - 1. Shop Drawings: Furnish to the Engineer.
 - A. Shop drawings: (1) full-size 24 inch by 36 inch, and (4) half-size 11½ inch by 17 inch sheets with a 1½ inch blank margin on the left-hand edge.
 - B. Place the State project designation data in the lower right-hand corner of each sheet.
 - 2. Color and Style: Furnish to the Engineer.

- A. Color and Style: Sample of block to be used for CMU wall, and sample of rock facing and cap to be used for raised planters.
- B. Stonework
 - 1. Product Data: Submit manufacturer's technical data for each type of stonework accessory, joint reinforcement, anchors, ties, admixtures, and other specified manufactured products.
 - 2. Shop Drawings: Show all fabrication dimensions and locations for placing reinforcing steel, anchors, and accessories.
 - 3. Grout Mix Design: State type and dry weights of cements, saturated surface dry weights of fine and coarse aggregates, quantities, types and names of admixtures, and quantity of water. Furnish evidence that materials used and proportion selected will produce grout of quality specified.
 - 4. Method of grouting.
 - 5. Proposed hot and cold weather construction procedures.
 - 6. Samples: Submit the following samples:
 - A. Stone samples in form of two sets of 3 pieces of sandstone. The samples shall be typical of the minimum, average, and maximum range of color, texture, and finish to be expected in completed work. Samples shall be provided for raised planters and water feature. These samples shall be approved before construction of these items is started.
 - B. Mortar samples in color specified to be expected in completed work.
 - C. Sealant samples for each type and color of joint sealant.
 - 7. Test Reports: Certified reports of materials tests including interpretation of results relative to compliance with specified requirements.

1.4 QUALITY ASSURANCE (STONEWORK)

- A. Comply with ACI 530.1-88. Keep a copy of ACI 530.1-88 available for reference on the job site.
- B. Source Responsibility for Stone: Obtain from as many quarries as necessary to provide stone with consistent properties as specified. Three quarries having suitable stone are:
 - 1. State Stone Corp., West Murray, UT, Phone No. 801/ 262-9323. Quarry site is near Torrey, UT.
 - 2. Hanson Quality Building Stone, Sandy, UT, Phone No. 801/ 255-2911. Quarry site is near Torrey, UT.
 - 3. Bitter Seeps, Bureau of Land Management (BLM) public quarry, Arizona. Contact BLM Arizona Strip District Office, St. George, UT, 435/688-3200.
- C. Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform quality and from one manufacturer for each cementitious and admixture component and from one source or producer for each aggregate.
- D. Single Source Responsibility for Other Materials: Obtain each type of stone accessory, sealant and other materials from one manufacturer for each product.
- E. Do not use any piece of stone that does not fall within the approved range of color, finish, or texture.
- F. Testing:
 - 1. Testing Service: Employ and pay an independent testing laboratory to perform testing.
 - 2. Test stone compliance with physical property requirements of referenced ASTM standard specifications. Conduct tests using specimens randomly selected from and representative of, actual materials to be incorporated in the project.
 - 3. Preconstruction Compatibility and Adhesion Testing: Submit samples of all materials proposed for use in contact with, or proximity of, joint sealants, to sealant manufacturer for compatibility and adhesion testing in accordance with sealant manufacturer's standard testing methods. Submit not less than 9 pieces of each type, variety and finish of stone and of setting buttons and joint sealant backings.

4. As specified above, submit test results in writing and in form specified under ASTM test method.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery:

1. Delivery masonry materials to project in undamaged condition.
2. Deliver masonry materials without delaying progress of the work.
3. Deliver all stone to site prior to beginning stonework.

B. Storage and Handling

1. Store cementitious materials off the ground, under cover and in dry location.
2. Store stone on wood skids or pallets, covered with non-staining, waterproof membrane. Place and stack skids and stones to distribute weight evenly and to prevent breakage or cracking of stones. Keep stone dry regardless of weather conditions.
3. Store and handle stone and related materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, breakage, chipping, or other causes.
4. Do not use pinch or wrecking bars.
5. Lift with wide-belt type slings where possible; do not use wire rope or ropes containing tar or other substance which might cause staining. If necessary to move stone, use wood rollers with cushions at end of wood slides.

1.6 PROJECT CONDITIONS

A. Protect work during erection.

1. Cover top of walls with non-staining waterproof sheeting at end of each day's work and during adverse weather. Cover partially completed structures when work is not in progress. Extend cover a minimum of 24" down both sides and maintain secure.
2. Prevent staining of stone from mortar, grout, sealants, or other sources. Immediately remove such materials without damage to stone or replace stone.
3. Use coverings on the ground, and over the wall surface if necessary, to protect walls from rain-splashed mud and mortar splatters.
4. Protect sills, ledges and projections from droppings of mortar and sealants.

B. Comply with approved hot and cold weather procedures.

1. Do not lay masonry when ambient temperature is below 40 degrees F, unless approved means are provided to heat materials, protect work from cold and frost, and ensure that mortar will harden without freezing.
 2. If water saturation cleaning methods are used, allow enough time for masonry to dry thoroughly before it is exposed to freezing temperatures.
 3. Do not lay units which are wet or frozen.
- C. Do not install sealants when ambient and substrate temperatures are outside the limits permitted by sealant manufacturer or below 40 ° F or when joint substrates are wet due to rain, frost, condensation or other causes.

PART 2 PRODUCTS

2.1 MATERIALS – GENERAL

- A. Manufacturers and their model numbers are listed to establish a basis for design and a standard of quality. Other manufacturer's products may be used provided they are approved as equal.
- B. Carefully inspect finished stones at fabrication plant for compliance with requirements relative to qualities of appearance, materials and fabrication; replace defective stones with ones that do comply. Match range of colors and other appearance characteristics represented in approved samples and field-constructed mock-up.

2.2 MORTAR

- A. Concrete Masonry Units
 1. ASTM C270-95a, Type S, meeting Proportion Specification requirements. Use low alkali II Portland cement, Type S hydrated lime, potable water, and a water reducing and plasticizing agent. Do not use masonry cement.
- B. Sandstone
 1. ASTM C270-95a, Type N, meeting Proportion Specification requirements. Use low alkali Type II Portland cement, Type S hydrated lime, and potable water. Amount of lime shall be equal to less than the amount of Portland cement. Do not use masonry cement.

2. Color: Match standard Goldenrod color used for all stonework in the park as approved by the Contracting Officer.

2.3 GROUT

- A. ASTM C476-91, Type Coarse. Type II portland cement. Minimum compressive strength, 2,000 psi per ASTM C1019-89a. Design slump, 9 inches plus or minus 1 inch per ASTM C143-90a.

2.4 CONCRETE MASONRY UNITS (CMU)

- A. Steam cure air dry units for at least 30 days before delivery. Use no chipped or cracked units for exposed work.
- B. ASTM C90-92, Grade N, Normal Weight, Type I. Minimum net area of compressive strength, 1,900 psi. Minimum face shell thickness of 1-1/4 inches unless shown otherwise. Use two-core hollow units.
- C. Surface Texture: Smooth faced surface with normal texture.

2.5 SANDSTONE

- A. Split / natural face horizontal grain sandstone. Comply with ASTM C616-95 and meet the following requirements:
 1. ASTM C97-96
 - a. Absorption: 5.8% maximum, average less than 5.7%
 - b. Specific Gravity: 2.24 minimum, average greater than 2.26
 - c. Unit Weight: 140 pcf minimum, average greater than 141 pcf
 2. ASTM C170-90, compressive strength.
 - a. Sample parallel to grain: 6,500 psi minimum.
 - b. Sample perpendicular to grain: 5,500 psi minimum.
- B. Type and Color: Informal random range pattern closely matching the red colors of Navajo sandstone, horizontal grain, and surface texture of walls existing in the park, as approved. Do not use vertical grain or buff colored stone.

2.6 JOINT REINFORCEMENT, ANCHORS, AND TIES

- A. Cold drawn steel. Hot-dip galvanize, in accordance with ASTM A924-96, Class G60 both sides, all sheet metal completely embedded in mortar or

grout. Galvanize, in accordance with ASTM A641-92, Class 3, wire ties and anchors completely in mortar or grout. Hot-dip galvanize, in accordance with ASTM A153-82, Class B-2 or ASTM A641-82, Class B (1.5 ounces per square foot), joint reinforcement and all other anchors and ties.

- B. Wire Mesh Ties: Minimum 16-gauge, 1/2 -inch mesh, cut into strips 1 inch less than width of the partitions or walls in which the ties are used. AA216 by AA Wire Products Company, Chicago, Illinois; MWT by Hohman and Barnard, Inc., Hauppauge, New York; or approved equal.
- C. Corrugated Ties: 16-gauge sheet steel, minimum 7/8 inch wide and 7 inches long. AA311 by AA Wire Products Company, Chicago, Illinois; CWT by Hohman and Barnard, Inc., Hauppauge, New York; or approved equal.
- D. Joint Reinforcement: ASTM A82-90a. Ladder type prefabricated steel reinforcement especially designed for embedment in horizontal mortar joints. Side rods 8 gauge (No. 8), and cross rods 9 gauge (No. 9) in areas of walls, typical unless noted otherwise. Deform and butt weld longitudinal wires to cross wires in the same plans. Provide specially formed pieces for corners and intersections of all walls. Dur-O-Wal, Arlington Heights, Illinois, or approved equal.

2.7 REINFORCING BARS

- A. Section 03310.

2.8 CONTROL JOINT KEYS

- A. Rapid Control Joint, Regular, manufactured by Dur-O-Wal, Arlington Heights, Illinois, or approved equal.

2.9 CLEANING MATERIALS

- A. Potable water and non-ionic detergent, as approved containing no caustic or harsh filler or abrasives.

2.10 WATERPROOFING

- A. Provide single component, polymer modified, cold-applied, water-based, liquid waterproofing or approved membrane, applied a minimum of 60 mils.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive stonework and conditions under which stonework will be installed and report to Contracting Officer any conditions which are not in compliance with requirements. Verify that foundations and other work supporting the masonry are constructed to elevations and dimensions shown that reinforcing dowels and connectors are accurately placed. Do not proceed with work until conditions and surfaces are acceptable.

3.2 PREPARATION

- A. Thoroughly clean stone surfaces removing laitance, debris, ice, ponding water, soil, stains, and all other foreign materials. Scrub with fiber brushes followed by a thorough drenching with clear water if necessary. Use only approved cleaning compounds.

3.3 GENERAL

- A. Do not construct masonry during rain, sleet, or snow without protection. Follow approved hot and cold weather procedures.
- B. Clean reinforcement anchors and ties before setting in mortar or grout.

3.4 STONE FABRICATION

- A. Fabricate stonework in sizes, shapes and finishes as shown, including details on drawings and final shop drawings.
- B. Cut and drill sinkages and holes in stones for anchors, fasteners, supports and lifting devices needed to set stonework securely in place; shape beds to fit supports.
- C. Manufacture stones to produce pieces of granularity, thickness, size and shape as shown and specified. Only back faces may be sawn, except where noted otherwise. Shape joints and clip and feather stone face as needed to achieve generally convex relief similar to existing park stonework.
- D. Provide chases, reveals, reglets, openings and similar features in stones as needed to accommodate contiguous work.
- E. Finish exposed faces, ends, and edges of stones to match approved samples.

3.5 MORTAR

- A. ASTM C270-95a.

3.6 GROUTING

- A. Clean spaces to be grouted of all mortar droppings, loose aggregate, and debris. Secure all reinforcement in accurate locations.
- B. Do not use aluminum equipment for handling or pumping grout.
- C. Mix grout thoroughly to a plastic mix suitable for pumping without segregation.
- D. Place grout before any initial set occurs, within 1-1/2 hours after water has been added.
- E. Grout pour height shall not exceed 5 feet. Consolidate grout at time of placement by mechanical vibration. Reconsolidate after initial water loss and settlement by mechanical vibration.
- F. Between grout pours, form horizontal construction joints by stopping the grout a minimum of 1-1/2 inches below a mortar joint. Where bond beams occur, at pre-cast concrete lintel bed joints, and at top of walls, stop grout pour a minimum of 1/2 inch below top of masonry.
- G. Grout solid all CMU cells.

3.7 CONCRETE MASONRY UNITS

- A. Minimum Compressive Strength of Masonry: $f'm = 1,500$ psi.
- B. Protect adjacent surfaces from staining. Keep tops of walls covered with non-staining waterproof coverings when work is not in progress. When work is resumed, clean loose mortar from top surface.
- C. Keep open space at control joints free of mortar by using a continuous wood or metal strip temporarily set in the wall.
- D. Stop horizontal run masonry by stepping back one-half of masonry unit length in each course.
- E. Provide adequate curing for masonry in accordance with approved hot and cold weather construction procedures. Protect new construction from direct sunlight and wind. Wet exposed mortar joints with a fine water spray daily for four days or cover masonry with polyethylene.

- F. Set concrete masonry units in running bond, plumb, level, and true to line, with uniform, flush cut, 3/8-inch joints. Lay units with full bed, side, web, and head joints.
- G. Reinforcement, Anchors, and Ties:
 - 1. Set joint reinforcement in horizontal mortar joints at vertical spacings shown on the drawings but not exceeding 16 inches. Start in first mortar joint above foundation and end in the bed of top course. Splice ends of joint reinforcement by lapping ends at least 12 inches.
 - 2. Place reinforcing bars in final position prior to grouting. Set vertical bar reinforcement where shown, centered in the vertical core. Hold in position at top and bottom and at intervals not exceeding 192 bar diameters. Lap all splices a minimum of 60 bar diameters. Fill all cells containing reinforcement, anchors, or inserts solidly with grout in lifts not exceeding 5 feet.
 - 3. Build ties into masonry work to support veneer. Space ties to support no more than 2 square feet of stone veneer area, but not more than 24 inches on center horizontally.
- H. Joints:
 - 1. Joints: Cut all Joints flush.
 - 2. Control Joints: Form where shown. Stop reinforcement at joints; extend through bond beams; rake out 1/2 inch to receive sealant.

3.8 SETTING STONE

- A. Execute stonework by skilled mechanics, and employ skilled stone fitters at the site to do all necessary field shaping as stones are set.
- B. Match pattern on approved previously constructed park structures.
- C. Provide chases, reveals, reglets, openings and other spaces as shown to accommodate contiguous work. Close openings in stonework after other work is in place with stonework matching that already set.
- D. Set stones to comply with requirements shown on drawings. Install anchors, support, fasteners and other attachments necessary to secure stonework in place. Shim and adjust anchors, supports, and accessories to set stones accurately in locations shown with uniform joints of widths shown and with edges and faces aligned according to established

relationships and specified tolerances. Provide weeps at 24 inches on center maximum.

- E. Use solid grout method with full mortar backing, vertical joints, and horizontal beds for setting stone.
 - 1. Rake exposed joints $\frac{1}{2}$ to $\frac{3}{4}$ - inch deep. Do not exceed $\frac{3}{4}$ - inch depth.
 - 2. Joint Width:
 - a. Vertical: Vary From $\frac{1}{2}$ - inch minimum to 1- $\frac{1}{2}$ - inch maximum in proportion to adjacent stone.
 - b. Horizontal: Vary from $\frac{1}{2}$ - inch minimum to 1- $\frac{1}{2}$ - inch maximum in proportion to adjacent stone.
- F. Set stones to comply with the following tolerances:
 - 1. Variation from Plumb and Level: Overall lines and surfaces of columns, walls and rises, not to exceed $\frac{1}{2}$ - inch in 10-feet. For external corners, expansion joints, control joints and other conspicuous lines, do not exceed $\frac{1}{2}$ - inch in 20- feet. For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed $\frac{1}{4}$ - inch in any bay or in 20-feet maximum.
 - 2. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus $\frac{1}{4}$ - inch nor plus $\frac{1}{2}$ - inch.
 - 3. True plane on split face stones: Variation from true plane of surface shall not vary more than 1- $\frac{1}{2}$ - inch plus or minus measured across the stone in any direction.
 - 4. Do not allow surfaces of adjacent stones to vary more than plus or minus $\frac{1}{4}$ - inch at joints.
 - 5. Provide expansion joints, control joints and pressure relieving joints of widths and at locations shown.

3.9 FIELD QUALITY CONTROL

- A. As directed, test stone for compliance with specifications. Conduct tests using specimens randomly selected by Contracting Officer.
- B. Test frequency will be no less than that necessary to provide test specimens from each 2,500 sq. ft. of exposed stonework.

- C. Submit test results in writing on same tests are made in accordance with submittals article.

3.10 ADJUSTING AND CLEANING

- A. Remove and Replace Stonework:
 - 1. That is broken, chipped, stained or otherwise damaged.
 - 2. Where there is a defective joint.
 - 3. Where stones do not match approved samples.
 - 4. Where stonework, including joints, does not match approved field-constructed mock-up.
 - 5. Where stonework does not comply with other parts of this specification.
- B. Clean stonework not less than 6 days after completion of work, using clean water and fiber brushes. Do not use wire brushes, acid- type cleaning agents, cleaning compounds with caustic or harsh fillers, or other materials or methods which could damage stone.

3.11 CURING

- A. Provide adequate curing for stonework in accordance with approved adverse weather construction procedures. Protect new construction from direct sunlight and wind. Wet exposed mortar joints with a fine water spray daily for four days or cover masonry with polyethylene.

3.12 PROTECTION

- A. Provide protection which ensures stonework being damage or deterioration at time of completion.

3.13 WATERPROOFING

- A. Apply waterproofing according to these, and the manufacturer's specifications. Ensure proper curing time before backfill. Use a gauge to ensure a minimum of 60 mil thickness during application.

END OF SECTION

June 29, 2006

SPECIAL PROVISION

STP-HPP-3184(2)0

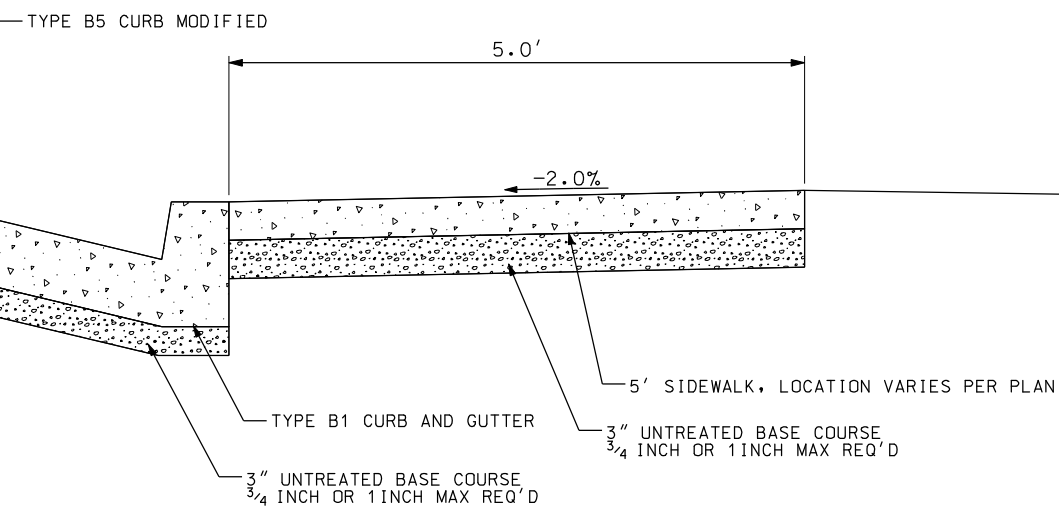
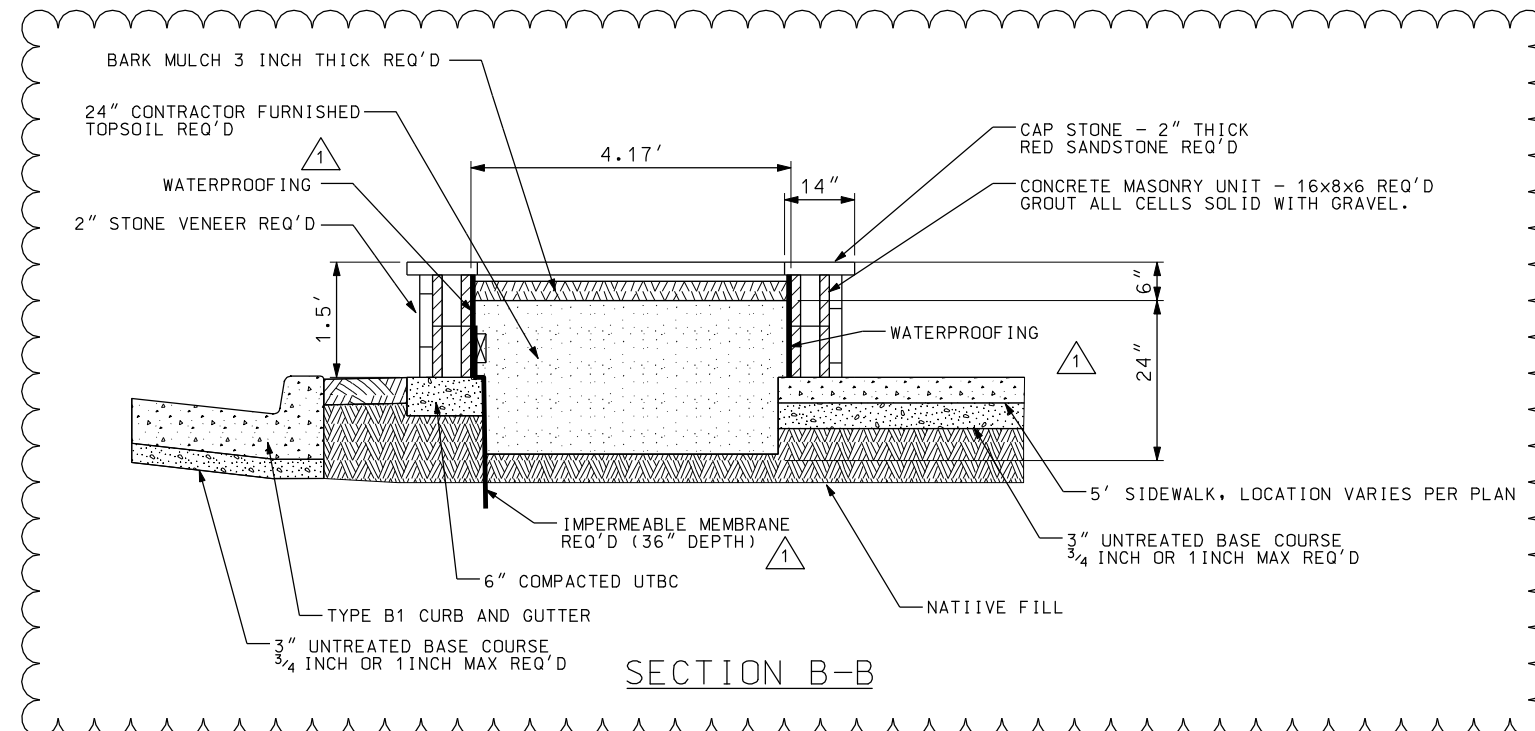
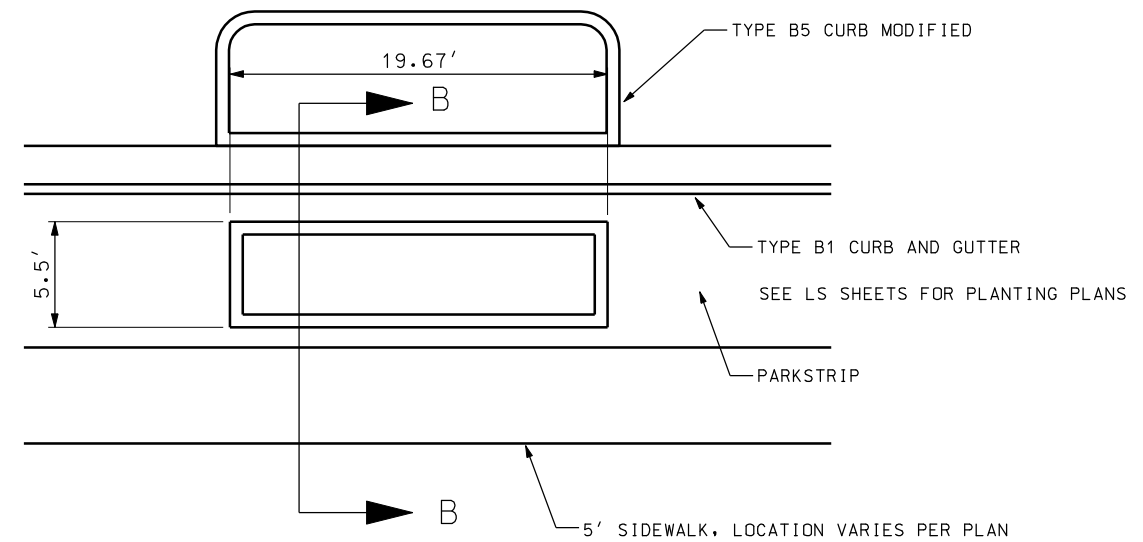
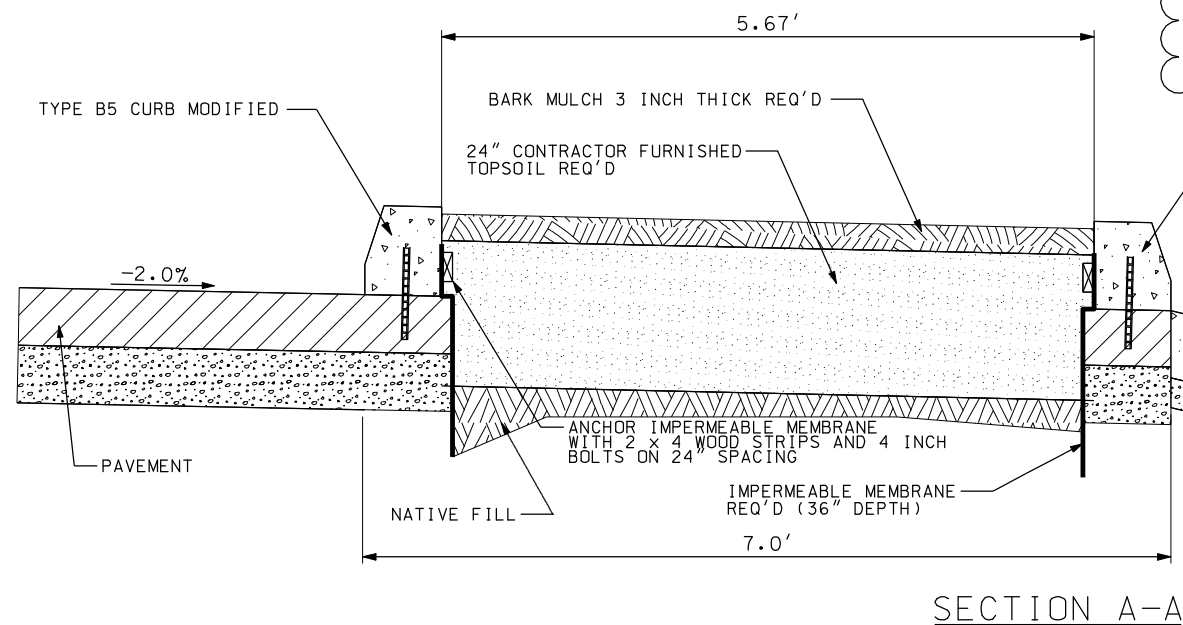
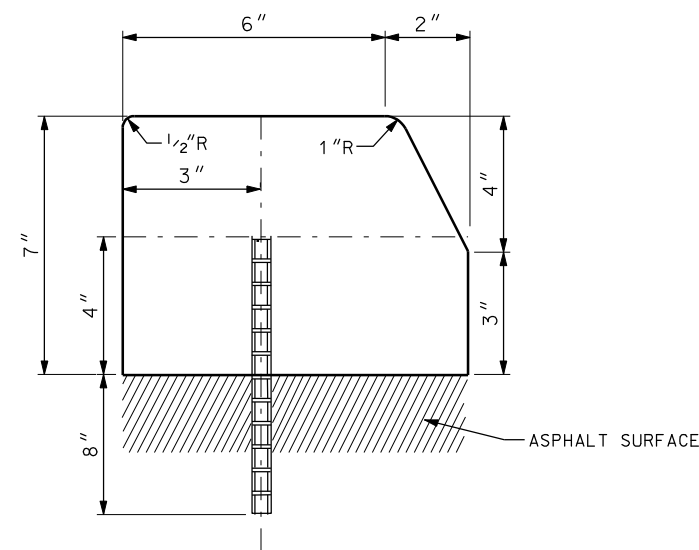
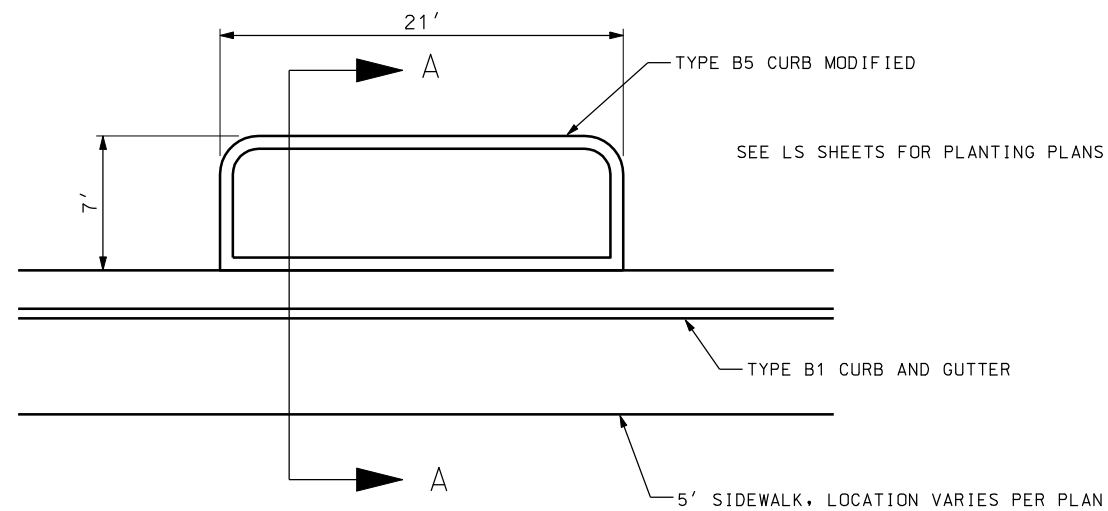
SECTION 02912S

CONTRACTOR FURNISHED TOPSOIL

Replace Paragraph B from Article 2.1 with the following:

- F. Provide clean local topsoil with a 20% by volume organic amendment (pay dirt or equal) and submit test results for amended material. The standard testing criteria will apply to the amended material. Test results will be reviewed by Santa Clara City and the Engineer and best judgment will be used for acceptance of amended material with deficient test results.

END OF SECTION



	DATE	REVISIONS
NO.	DATE	DESIGN REQUEST REVISED BY
		MAP'S PARCELS CORRECTED BY
		AOL
		BEJ
1	6/06	ADDED WATERPROOFING IMPERMEABLE MEMBRANE

